PB-214 448

INTERGOVERNMENTAL APPROACHES TO SOLID WASTE MANAGEMENT

Richard O. Toftner, et al

Environmental Protection Agency
Rockville, Maryland

1971

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PB 214 448

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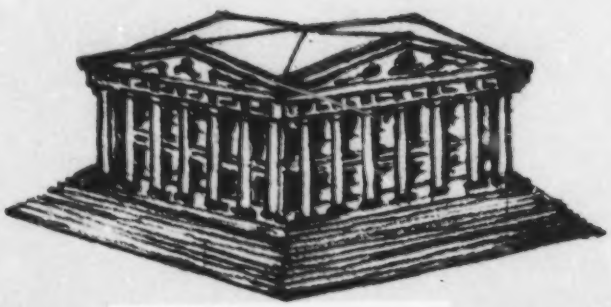

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INTERGOVERNMENTAL APPROACHES

TO SOLID WASTE MANAGEMENT

This report (SW-47ts) was written by

RICHARD O. TOFTNER
and
ROBERT M. CLARK

U.S. ENVIRONMENTAL PROTECTION AGENCY
Solid Waste Management Office
1971

EP 3.2:1N8

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402 - Price 30 cents

FOREWORD

Since passage of the original Solid Waste Disposal Act (Public Law 89-272, Title II) in October 1965, there has been considerable discussion about what organizational form a solid waste management system should take. It is obvious from even a cursory study that most solid waste management systems have been operated haphazardly and scarcely deserve to be called "systems" because responsibilities are so fragmented. The lack of a proper organizational framework having adequate power at an overall jurisdictional level adds to the problem. It is clear, therefore, that one of the most important ways to solve solid waste problems is to define and structure an effective and efficient system and to set it within an appropriate overall organizational framework.

The purpose of the following paper is to examine the basic organizational requirements of solid waste management systems and then relate them to the intergovernmental coordination mechanisms that are available for fulfilling such requirements within regional configurations. The primary objective is to outline an "integrated management system" that includes planning, organization, operations, and control on a rational regional basis.

--RICHARD D. VAUGHAN
Assistant Surgeon General
Acting Commissioner
Solid Waste Management Office

INTERGOVERNMENTAL APPROACHES TO SOLID WASTE MANAGEMENT

Because solid waste problems transcend governmental boundaries, many have suggested that regional systems be used to solve them. This approach often has merit, but the regional concept has not been sufficiently explained. In addition, the magnitude of the ideal region, or what defines it, is not clear. Does it embrace only a major urban area, such as a heavily populated Standard Metropolitan Statistical Area (SMSA) or can it include part of the hinterland too? Can it be a group of rural counties, or a network of cities and villages within those counties? Perhaps even a group of States could constitute a solid waste management region. But whatever the criteria used--geographic, demographic, hydrologic, economic, or community of interest--regions will include several contiguous political entities and will inevitably present an intergovernmental problem if functional unification is attempted. When a "regional approach" is followed, the problem should, therefore, be viewed as being more one of intergovernmental coordination than regionalism.

Many of our other urban problems, and a number of nonurban ones as well, overlap governmental boundaries and can be considered regional if intergovernmental repercussion is the criterion. This fragmentation of authority and responsibility is a problem of such critical importance

that it must be solved before we can hope to find answers to the problems of pollution, crime, dwindling urban finances, housing, poverty, and transportation. They all have intergovernmental threads, but simply saying so is not enough. Neither is it necessary to discuss at length the often-mentioned benefits that accrue from approaching intergovernmental problems on an intergovernmental basis: (1) savings in public expenditures by avoiding duplication of services; (2) reduction of unit costs by spreading expenditures over more users of services; (3) better overall planning and managing for both short- and long-term results.

The difficulty is that these intergovernmental organizational forms have not been easy to apply to the specific problem of solid waste management. There is, however, no shortage of intergovernmental mechanisms to investigate--in fact, they abound in local government. We have special districts, authorities, and utilities for one purpose or another as well as joint power and service agreements. Our ingenuity has been stretched in devising methods of providing intergovernmental contractual services, as in the Lakewood Plan in Los Angeles County, California. There have been experiments in metropolitan government mergers, such as Miami-Dade County, Florida, Nashville-Davidson County, Tennessee, Jacksonville-Duval County, Florida, and Unigov in Indianapolis-Marion County, Indiana. Some intergovernmental arrangements have already been successful in solid waste management, such as the Los Angeles County Sanitation Districts and the county-wide system operated by Orange County, California.

We also have numerous metropolitan planning organizations, the most recent being Councils of Governments (COG's), throughout the Nation. Many of these agencies are single purpose operational entities, and some are empowered to perform several municipal-type functions on an intergovernmental basis. Planning agencies and COG's can often only recommend action, but others have the power to regulate, and some even house operational units for plan implementation. For example, the unique Minnesota Metropolitan Council serving the Minneapolis-St. Paul SMSA (seven counties and the Twin Cities) is both an agency created to coordinate the metropolitan area's planning and development and to implement the Metropolitan Sanitary Sewer Plan.[1,2] The Council's broad responsibility to prepare a comprehensive development guide for the seven-county area covers policy statements, goals, standards, and programs; it also issues guides for an orderly and economic area development, both public and private. These consider physical, social, and economic needs and developments that will affect the entire area. The latter include residential, commercial, and industrial growth, parks, open land, airports, highways, transit facilities, public hospitals, libraries, schools and other public buildings, sewers, and solid waste disposal facilities.

The Council prepares and modifies the Metropolitan Sanitary Sewer Plan and appoints the Metropolitan Sewer Board to implement it. Budget approval also rests with the Council. Through its operating system, the Sewer Board constructs and operates necessary facilities and allocates costs among municipalities in the metropolitan service area. Each municipality is billed by the Board according to the extent of service

provided. Municipalities raise revenue to pay these bills by imposing user charges within their jurisdictions; they are often applied as surcharges to water bills.

The Council must prepare and adopt a comprehensive plan for disposal of solid waste in the metropolitan area. It does not actually implement the plan, but it exerts considerable influence. Implementation is the responsibility of each of the seven counties, which are legally obligated to follow the plan.

This is, of course, a special case, and it is not necessarily adaptable elsewhere in the nation. Each area will have to adopt mechanisms that are acceptable to its participants and adaptable to the specific organizational framework involved.

Organizational Requirements

The ultimate success or failure of any solid waste management system is realized at the operational level. The day-to-day implementation of technology and public service objectives requires an efficient and effective basic organization. Therefore, six points crucial to the development of an organization for solid waste management should be pointed out: (1) It should be designed to achieve planned objectives; (2) it should have authority and responsibility appropriate to the task at hand; (3) it should fit both legally and logically into the overall jurisdiction of which it is a part; (4) it must have adequate numbers of qualified personnel; (5) it must have adequate capital and operating finances; (6) it should be an integrated system that concerns itself

with storage, collection, transportation, disposa , and possibly reclamation and reuse of solid waste materials.

In summary, the overall objective should be to develop an organization that is capable of responding to the needs of solid waste management. It should have the strength, resources, and flexibility to initiate activities and effect changes that will improve the system and the delivery of services to consumers within a healthful and livable environment.[3]

Regional Configurations

In order for these objectives to be achieved at the regional operational level a suitable overall jurisdictional framework must be employed. After one has been established, appropriate intergovernmental operating organizational forms can be adapted.

The basic intergovernmental arrangements or configurations developed and examined in this paper are urban, rural, and statewide regions. They are defined in light of the following characteristics: (1) the existence of legally established regional boundaries; (2) the presence of established transportation corridors that outline or connect various points; (3) geographic or topographic features; (4) agglomerations of municipal corporations with contiguous boundaries; (5) density and distribution of population.

All of these characteristics are usually closely related. For example, an established region often has clusters of populated areas within municipalities that are connected by transportation corridors. Regions are also frequently delineated by legislative or administrative

action. Hills, rivers, or lakes might further serve to outline a region and limit its boundaries. These often-related characteristics should be considered when developing proposals for solid waste management regions. Sometimes regionalization might not be the answer, for example if the population centers are widely separated.

Urban Regions. Urban regions have definite legal boundaries that are coterminous with those of one or more counties. The regions usually encompass several municipalities that have contiguous boundaries and are highly populated. Urban regions might include muncipalities in more than one State. Major urban regions in the nation now cover some 200,000 square miles, and the total will be about 340,000 by the year 2000.

One of the most common types of urban region is the SMSA. A Council of Government (COG) jurisdiction, a metropolitan planning area, or an area-wide sanitation district covering all or major portions of an SMSA might meet the definition of an urban region. Although an SMSA and a COG are not usually operating jurisdictions, they offer convenient and relevant delineations within which operating jurisdictions can be established. On the other hand, these areas are already a patchwork of districts, municipalities, and overlapping units. Therefore, when such established area-wide operating agencies as utility districts, authorities, and sanitation districts exist in urban regions, their use in a solid waste management system should be considered. Perhaps they will need only slight modifications to accommodate solid waste activities within their structures. This would prevent the proliferation

of additional units. Where suitable area-wide jurisdictions do not exist, they should be established using available joint mechanisms or by encouraging the State to authorize such mechanisms.

Rural Regions. Although they are outside metropolitan areas, rural regions sometimes approach urban areas in population densities. A typical rural region has at least one city of less than 50,000 people that is surrounded by smaller municipalities. The region usually contains farms, some forested tracts, and perhaps mines. Its boundaries may be coterminous with those of a county or a group of counties. In fact, it is advantageous to so establish them because this provides a ready-made legal governmental entity for the installation of a solid waste management system. Economic, population, and geographic relationships are also more easily maintained. Rural regions offer better opportunities for establishing intergovernmental solid waste management systems than metropolitan areas because they have fewer active conflicting governmental units. Townships, for example, are not normally active in rural regions, but in metropolitan areas they are often incorporated and add to governmental fragmentation. In addition, rural regions will usually have more open land for use as sites for transfer stations, disposal areas, reusable material storage yards, and reduction facilities.

Statewide Interstate Regions. No statewide interstate regions exist, but in concept they would consist of the entirety of two or more contiguous States that possess a large degree of economic, cultural, administrative, and functional homogeneity.[4]

Depending upon the purpose, any number of States could be selected to form a statewide interstate region. California, for example, might be combined with Washington and Oregon in one arrangement and with Arizona and Nevada in another. The Bureau of the Census uses regional groupings of States to collect and analyze its data. The North Central census region, for example, includes 12 States from Ohio and Michigan to North Dakota and Kansas.

Planners of solid waste management operating systems in statewide interstate regions should remember that several hundred intergovernmental units might be involved in addition to each State. It would be difficult to develop agreement for establishing regions on such a broad basis because interlocal and contractual arrangements applicable to both urban and rural regions may not be appropriate. In this situation, interstate compacts would probably be required. Although there are precedents for this approach, none has included several States in their entirety. For example, the well-known Port of New York Authority, established by interstate compact in 1921, carries on varied and extensive operations only in the New York City-New Jersey area. Water basin agreements, such as the Delaware River Basin Commission Compact, which includes parts of New York, New Jersey, Pennsylvania, and Delaware, probably provide a better analogy since a larger relevant area is involved. In addition, the objectives of controlling pollution and conserving resources can be more easily related. One of the most famous large-scale environmental-oriented regional formations in the Nation is the Tennessee Valley Authority (TVA). Operating under legislation enacted in 1933, TVA covers a territory of some 80,000 square miles.

Regional planning and operations in the United States have had their fullest expression in the work of TVA in its basin-wide planning for the development of water resources. Plans have been translated into water management, encouragement of navigation, production of hydroelectric power that has resulted in substantial economic development, reforestation, erosion control, pollution control, public health, and recreational development.[5]

Maximum Operational Authority

As mentioned earlier, intergovernmental mechanisms have been used with varying success for several purposes in both interlocal and interstate areas. Their use has, however, been generally limited to a single function and often to only a portion of an urban region, rural region, or statewide interstate region. In most cases, the agreements could have rationally extended to include the total region.

Intergovernmental mechanisms have been used for sewer and water services and facilities, hospitals, governmental buildings, police and fire protection, and even solid waste systems. Most of these mechanisms have not, however, been established according to the concept introduced here--maximum operational authority--for solid waste management. In essence, this approach states that, wherever possible, a solid waste management system should be installed throughout an entire region and operated universally on an integrated management basis. Everyone would receive solid waste service. In a rural region of three counties, for example, maximum operational authority would mean that no person,

business, city, or any entity would lack an approved standard of collection and disposal service. Charges for the service would apply universally and reflect accurately the total cost of the service. In an urban region, the maximum operational authority would encompass the entire metropolitan area.

This concept does not preclude private collection and disposal services, nor the subsidizing of service charges to some individuals unable to pay for the service, such as ghetto dwellers or disadvantaged rural persons. In addition, existing intergovernmental mechanisms could be applied within this conceptual framework. An examination of these mechanisms, as related to the maximum operational authority concept, will provide useful examples.

Intergovernmental Mechanisms

In order for solid waste problems to be solved by planning and implementing solid waste management systems within regional configurations, appropriate legal organizational mechanisms must be established. They must be oriented toward intergovernmental cooperation and serve to unify the numerous and often conflicting individual jurisdictions characteristic of regional areas. In addition, the regional configuration selected should be conducive to the establishment of a solid waste management system on an integrated management basis having maximum operational authority. The operating region should be delineated in a way that maximizes the population that is served. Incompatibility will often require establishing a separate, but adjoining operating region.

Delineation of a county or group of counties will often provide a convenient organizational framework for a solid waste management system.[6]

Policymakers and planners of intergovernmental organizations for solid waste management must be concerned about the joint approach mechanisms available, including administrative arrangements, financing, management reporting, and areas of mutual responsibility. The following sections will examine these considerations in their relation to solid waste management.

Three main intergovernmental mechanisms are available: (1) the joint operation by two or more units of a service facility; (2) provision of a service on a contractual basis by one governmental unit to at least one other; (3) an overall operating district, authority, or utility supervised by a board of commissioners or directors with day-to-day operation delegated to a manager and staff. All three can be modified depending upon circumstances. Under each, the agency or operating authority responsible for facilities or services may use its own staff and facilities, those of the units receiving the service, or those of private suppliers or contractors.

Joint Operations. In all States, local units of government may agree under certain circumstances to jointly perform various public services. Generally, agreements can be used to undertake together any functions and responsibilities that each unit could undertake singly. Typical services might include police and fire protection, sanitation, public health, joint operation and occupancy of public buildings, mass transportation, and water supply. The joint efforts can involve an

exercise of powers or an agreement or contract for services. In the application to solid waste management, interest centers on the contract or agreement among units of government for the joint provision of a service.

The financing techniques used by a local government acting alone can usually be used in joint operations. User charges might be levied for direct operations and to retire revenue bonds. In other situations, funds might be provided from general revenues derived from tax levies imposed by each participating governmental unit or from special taxing powers of the solid waste management jurisdiction. Exact methods would depend upon State statutes or the preferences of the participants to the joint agreement.

The Advisory Commission on Intergovernmental Relations states that "Intergovernmental contracts and agreements are the most widely used formal method of accommodating governmental problems to geographic boundaries. . . . They constitute a method of adaptation which bypasses basic structural and organizational problems and the issue of allocating responsibility among levels of government. Finally, they stress consolidation of services, rather than consolidation of governments."[7]

Contractual Services. Municipal-type services provided under contract include those supplied by one governmental unit to other units, by private operators, or by some combination thereof. Many States have enacted legislation that enables its local units of government to enter into such agreements. Among their many advantages are the elimination of duplicate services, staffs, and expenditures among several neighboring

units of government. Operations and budgets are also more easily planned. If private contractors for services are utilized, the governmental unit does not have to hire and maintain its own employees. Furthermore, a contract with a private operator will fix costs for a definite period and thus provide a more positive planning base.

An interesting and potentially useful example of one unit of government providing solid waste management to others through contractual services is the Lakewood Plan. It is basically a contractual agreement whereby the County of Los Angeles, California, performs municipal services for its municipalities. These include police and fire protection, health, sanitation, planning, public works, water, finance, and sometimes management. Although the county had provided these services in limited areas to its municipalities for about 45 years, it was not until the City of Lakewood in southeastern Los Angeles County was incorporated in 1954 that all municipal services were supplied to a city. This was also the first such total municipal service arrangement in the United States.[8]

This method lends itself to area-wide provision of solid waste management services by an established unit of general government or by a solid waste management utility formed especially for the purpose.[9]

Overall Operational Organizations

In approaching solid waste management on a regional basis, intergovernmental agreements might be further formalized by establishing organizational entities that permit operations, possible taxing or user

fee assessment powers, and the incurring of debt through various bond mechanisms. The operational organizations relevant to intergovernmental management of solid waste are authorities, special districts, and utilities. They are usually established according to specifications contained in each State's statutes. Intergovernmental agreements or organizations at the local level that cross State boundaries must be authorized by statute in each State affected--sometimes by a constitutional provision. Congressional consent is usually not required for a local interstate organization, even though a type of interstate compact is involved.

Although there are advantages in having recourse to a specific organization with special powers, such as special districts and authorities, this approach should be taken with caution. It should be undertaken only after alternatives, such as an intergovernmental or contractual agreement, have been rejected. It has been far too easy to add layers of local jurisdiction each time a new problem arises. A satisfactory alternative, which combines certain advantages of several approaches, would be to organize, through an intergovernmental agreement, a region-wide authority that operates as a utility having maximum operational authority for an integrated solid waste management system. The authority-utility would have the power to license private contractors or to undertake its own collection, transportation, disposal, reduction, and reclamation operations and to establish and enforce all standards for a specific region. Financing its own facilities or leasing them to private contractors could be equitably done with funds derived from user charges and revenue bonds. Day-to-day management would be the

responsibility of a manager answering to a board of directors similar to a city manager-council arrangement or the manager of TVA. In a city having a council-manager form of government, the hired manager is responsible for day-to-day administration, preparation of the budget, and direction of the various departments. He answers to the city council, which tries to avoid becoming involved in administration. It does, however, determine policy, legislate, and pass on the budget. Using a regional example, TVA has three directors who plan the development of programs and determine policy. Administration is delegated to a general manager.

Operational Considerations

Whatever form the operating agency for solid waste management takes, it will have similar operational considerations. Provision will have to be made for planning and administration, including finance and budgeting, manpower, equipment and facilities management, and control and evaluation.

Operating and capital budgets must be prepared to plan and guide expenditures for current and future periods. Sources of revenue have to be identified. This may call for imposing general tax levies in the service area, effecting direct service charges, floating general obligation or revenue bonds, or perhaps using a pay-as-you-go technique. Regardless of the method or combination of methods used, efforts should be made to relate the cost of the integrated management system to adequate charges for the service provided.

Manpower must be considered carefully. Planning must include long-term staffing forecasts, recruitment methods, training elements and procedures, occupational health and safety standards, collective bargaining, wages, and grievance and arbitration arrangements. All position classifications should be considered, including equipment operators, clerks, administrators, and professional personnel in order to properly plan for short- and long-term needs, provide routes of promotion and continuity of the system, and to develop a relevant and strong training program. Equipment and facility needs, purchases, operating and capital costs, maintenance and salvage procedures must be planned and developed within the system. Finally, a way to control the system must be developed and maintained. Good accounting procedures with adequate records should be installed to measure not only financial aspects, but also services rendered, safety performance, employee efficiency, development, and retention, and public attitudes toward the service. If private contractors are franchised or licensed to provide the services, many of these considerations will be his management responsibility. Nevertheless, the responsible public agency must assure that its contractors perform their management duties efficiently and effectively in order to provide a high level of uninterrupted service at a reasonable cost.

Conclusions

Solid waste management must be approached according to the concepts of an integrated management system within a framework of maximum operational authority. Adoption of this broad approach will frequently require

a transcending of jurisdictional boundaries. Consequently, intergovernmental approaches to solid waste management must be taken. Intergovernmental solid waste management entities can often be related rationally to an urban, rural, or statewide interstate region. It is also possible and desirable to apply existing concepts of intergovernmental approaches to solid waste management in these three regional types. The options available include joint powers and services agreements, contractual arrangements, and overall operational organizations incorporating the advantages of authorities, compacts, and utilities.

Development of an integrated management system includes the organization of the region-wide intergovernmental jurisdiction and an actual operating element. In planning the system, consideration must, therefore, be given to finances, manpower, equipment and facilities management, and control and evaluation of the system's operation and performance.

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